

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Currently Amended) A method comprising:
storing a configuration for a distributed environment, which includes a first node, in a central storage of the distributed environment; and
updating a portion of the configuration by the first node in the distributed environment, the first node separate from the central storage, wherein updating comprises:; and
acquiring a lock for the portion of the configuration by the first node in the distributed environment;
modifying the portion of the configuration;
invalidating a representation of the portion of the configuration in the distributed environment;
releasing the lock;
updating a database at the central storage to reflect modifications of the portion of the configuration; and
blocking reads of the configuration from the database during the updating.
2. (Canceled)
3. (Canceled)
4. (Currently Amended) The method of Claim 21 wherein updating further comprises: notifying nodes in the distributed environment that the configuration has been updated.
5. (Currently Amended) The method of Claim 21 wherein the lock is cluster wide.
6. (Currently Amended) The method of Claim 21 wherein updating further comprises: writing changes to a shared database at the central storage.

7. (Currently Amended) The method of Claim 21 wherein modifying comprises:
changing a configuration object in a branch of a tree structure.
8. (Currently Amended) The method of Claim 21 wherein invalidating comprises:
sending a cache invalidation event to another node in the cluster.
9. (Currently Amended) The method of Claim 21 wherein invalidating comprises:
sending a message to a plurality of Java 2 Enterprise Edition (J2EE) nodes.
10. (Currently Amended) The method of Claim 21 wherein updating further comprises:
notifying a registered listener at a second node that the configuration has been changed,
the second node separate from the first node and the central storage.
11. (Currently Amended) A system comprising:
a plurality of nodes each having an instance of a configuration manager to maintain
consistent storage of a configuration across the nodes without passing configuration
modifications between the nodes, a node in the plurality of nodes to update a portion of the
configuration by:
 - acquiring a lock for the portion of the configuration by the node;
 - modifying the portion of the configuration;
 - invalidating a representation of the portion of the configuration;
 - releasing the lock;
 - updating a shared relational database to reflect modifications of the portion of the
configuration; and
 - blocking reads of the configuration during update;
a locking server shared by the plurality of nodes to coordinate access to the configuration;
and
a database management system to provide an interface with ~~a~~the shared relational
database, the shared relational database to store the configuration.
12. (Previously Presented) The system of Claim 11 wherein the configuration manager
comprises:

a configuration cache; and
a configuration handler.

13. (Original) The system of Claim 12 wherein the configuration manager further comprises:
a persistency handler.
14. (Original) The system of Claim 11 further comprising:
a configuration handler to permit access to and modification of the configuration.
15. (Original) The system of Claim 11 wherein the configuration comprises:
a plurality of persistent objects holding information about a Java 2 enterprise edition cluster.
16. (Original) The system of Claim 15 wherein some of the persistent objects are cacheable.
17. (Original) The system of Claim 11 wherein the configuration manager comprises:
a change event listener to notify registered components of configuration change events.
18. (Currently Amended) A computer readable storage media containing executable computer program instructions which when executed cause a digital processing system to perform a method comprising:
storing a configuration for a distributed environment, which includes a first node, in a central storage of the distributed environment; and
updating a portion of the configuration by the first node in the distributed environment, the first node separate from the central storage, wherein updating comprises: and
acquiring a lock for the portion of the configuration by the first node in the distributed environment;
modifying the portion of the configuration;
invalidating a representation of the portion of the configuration in the distributed environment;
releasing the lock;
updating a database at the central storage to reflect modifications of the portion of the configuration; and

blocking reads of the configuration from the database during the updating to reflect modifications of the portion of the configuration.

19. (Canceled)

20. (Canceled)

21. (Currently Amended) The computer readable storage media of Claim 49~~18~~ containing executable computer program instructions which when executed cause a digital processing system to perform the method wherein updating comprises:

notifying nodes in the distributed environment that the configuration has been updated.

22. (Currently Amended) The computer readable storage media of Claim 49~~18~~ containing executable computer program instructions which when executed cause a digital processing system to perform the method wherein updating further comprises:

changing the configuration locally;

writing the changes to a shared database at the central storage; and

committing the changes.

23. (Currently Amended) The computer readable storage media of Claim 49~~18~~ containing executable computer program instructions which when executed cause a digital processing system to perform the method wherein invalidating comprises:

sending a cache invalidation event to another node in the cluster.

24. (Currently Amended) The computer readable storage media of Claim 49~~18~~ containing executable computer program instructions which when executed cause a digital processing system to perform the method wherein updating comprises:

notifying a registered listener at a second node that the configuration has been changed, the second node separate from the first node and the central storage.

25. (Currently Amended) A system comprising:

means for maintaining consistent storage of configuration information in a distributed environment;

means for controlling write access to the configuration information by nodes of the distributed environment; and

means for interfacing with a relational database system to provide persistent storage of the configuration information; and

means for updating a portion of the configuration information by the nodes of the distributed environment, the nodes separate from the relational database system, wherein updating comprises:

acquiring a lock for the portion of the configuration information by the nodes of the distributed environment;

modifying the portion of the configuration information;

invalidating a representation of the portion of the configuration information in the distributed environment;

releasing the lock;

updating the relational database system to reflect modifications of the portion of the configuration information; and

blocking reads of the configuration information during the updating.

26. (Original) The system of Claim 25 wherein the configuration information comprises: a plurality of persistent objects holding information about a Java 2 Enterprise Edition cluster.

27. (Original) The system of Claim 25 wherein the means for maintaining comprises: a configuration cache resident in each node of the distributed environment; and a configuration handler resident in each node of the distributed environment.